



CREAMER ENVIRONMENTAL, INC.

CONTRACTORS & CONSULTANTS

12 Old Bridge Road, Cedar Grove, NJ 07009

201-968-3300 Fax (201) 968-3301

LETTER OF TRANSMITTAL

TO

Environ International Corporation

20 Custom House Street

Boston, MA 02110

DATE: 3/15/16	JOB NO.: 16-0463
ATTENTION: Nicholas Steenhaut	
RE: Metal Bank NPL Site	

WE ARE SENDING YOU

☐ Shop Drawings

☐ Copy of letter



Attached



Prints



Change order



Under separate cover via _____ the following items:



Plans



Samples



Specifications



COPIES	DATE	PAGES	DESCRIPTION
1	3/15/2016	1	Submittal #10.1 Rip Rap Elevation Survey Plan

THESE ARE TRANSMITTED as checked below:

☒ For Acceptance

☐ For your use

☐ As requested

☐ Review & comment

☐ Approved as submitted

☐ Approved as noted

☐ Returned for corrections

☐ _____

☐ Resubmit ____ copies for approval

☐ Submit ____ copies for distribution

☐ Return ____ corrected print

REMARKS

COPY TO:

SIGNED:

Meghan Murphy

Meghan Murphy
Project Coordinator



CREAMER ENVIRONMENTAL, INC.

REMEDIATION CONTRACTORS

12 OLD BRIDGE ROAD - CEDAR GROVE, NEW JERSEY 07009

(201) 968-3300 • FAX (201) 968-3301

Metal Bank NPL Site Philadelphia, PA Rip Rap Elevation Survey Plan

Creamer Environmental, Inc. (CEI) will mobilize to the site and as a part of the site preparation activities, a bathymetric survey will be performed by Aqua Survey Inc. to verify the bottom elevations and determine how much rip rap needs to be placed to achieve the proper design elevations. Within Zone 2 the rip rap work platform installed to facilitate the water repair work will remain in place and become part of the stabilization berm. As the rip rap is being placed, CEI will utilize the cable/chain of the clamshell bucket with incremental measurements marked off to guide the installation and sound the elevations of the berm during the placement. Where an excavator is used to place the rip rap near the sheet pile wall the stick of the excavator will be marked and used to determine the elevation of the rip rap as it is placed. The berm will be surveyed by Louis J Weber and Associates (Weber), a licensed professional surveyor, every other day during installation to determine if it is at the correct elevation within an approximate tolerance of $\pm 6"$. Based on the large size of the riprap the top surface will most likely vary by more than $\pm 6"$ since the majority of the stones are going to be 1' or larger.

Weber will implement conventional survey methods. It is noted that the channel is tidal and the measurements must be made with respect to a known elevation landside. A landside total station with a surveyor on a boat with a rod and prism will collect the horizontal and vertical data. The sensitivity of the survey method is greater than the variation of the rip rap surface. CEI will endeavor to maintain the surface such that it conforms to the proposed finished grades. Once an area is at the proper elevation it will be spot checked several days later to determine that it has not settled. If settlement has occurred Environ will be notified and CEI will await direction on how to proceed. After all of the rip rap has been placed a second bathymetric survey will be performed to generate the as-built survey for the records.